How Do You Measure the Knowledge Management (KM) Maturity of Your Organization? Metrics That Assess an Organization's KM State

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1. Introduction

Knowledge Management is the art of creating, organizing, applying, and transferring knowledge to facilitate situational understanding and decision making. (FM 3-0, 2008) Measuring the KM maturity of an organization and defining metrics that assess an organization's KM state is difficult. Much has been written on KM metrics, but very little provides practical methods to measure the KM state of an organization. The problem with most metric models is they are too complicated for the average person or KM professional to understand.

This paper explores practical ways to measure the KM state of an organization. This paper further examines accepted KM initiatives used throughout the KM community and determines useful metrics for those KM initiatives from a military stand point. Non military organizations will also benefit from this approach. Useful metrics are metrics that a Chief Knowledge Officer (CKO) or Knowledge Management Officer (KMO) can take and immediately adapt to measure the state of KM at his/her organization.

2. Metrics/Measures

Metrics, also known as "measures" or "key performance indicators" are indicators for assessing the effect of a particular project or activity. The most important characteristic to consider when choosing or defining a KM performance measure is whether the metric tells if knowledge is being shared and used. For example, a metric for a Best Practice database might be the number of times the database has been accessed. A large number of accesses or "hits" suggest that people are reading the document, but this does not definitively indicate whether it was useful to anyone or whether or not it improved operational efficiency or quality. A better metric would be to track database usage and ask a sampling of the users how it helped them. (MCCES, 2005) Organizations should measure what matters.

Measuring for the sake of measuring is fruitless and a waste of time. It is important that measures and metrics are developed and collected for the purpose of continuous improvement of knowledge management activities. (APQC, 2003) One method is to collect stories that explain metrics. For example – telling a story of how KM improved organizational efficiency by explaining how metrics were developed, collected and analyzed is extremely valuable. After data is collected, it is important to post the results and analyze them. Show leaders and employees that your KM Initiatives produced results.

3. Not All Metrics are Useful

Not all Metrics are useful. Some metrics don't really tell you anything useful and will lead an organization to false results. This paper lists metrics that should be avoided so you don't fall into the trap of collecting these metrics.

"Time Savings" is not always a good metric if it doesn't lead to that time leading to more productive employee. Typically time savings is calculated as (x hours per employee saved) x (y # of employees) x (cost per hour). Here's how any smart buyer would respond: "Saving me 4.6 hours of productivity per employee per week means each employee gets to duck out of the office at noon on a Friday.

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Where's the tangible benefit? Unless you show me how this leads to needing less *unit* resources per task and therefore a reduced headcount, I'm not going to see any real savings." (Patel, 2009)

4. What Gets Measured Matters and Gets Done

Metrics are important, because what gets measured gets done. Knowledge is an intangible asset, but the impact of KM is measurable. (APQC, 2003). Measures need to link to the organization's strategy. Note: You can't have a successful KM program using just one KM initiative. There needs to be a blended approach using several of the KM initiatives listed in this paper plus KM initiatives that are important to your organization.

5. One Size Does Not Fit All, But….

A review of the KM metrics literature says that one size KM does not fit all organizations. Research reveals that there are common KM initiatives that most successful organizations with a KM program use. This paper looks at common KM initiatives and metrics to measure those KM initiatives. The KM initiatives listed in his paper are not all inclusive. There are no guarantees that these measures are the most appropriate for your organization. These metrics describe what you can do, not what you must do or even should do. Select the KM initiatives and measures that matter to your stakeholders. (DON, 2001) There are many more additional KM Initiatives that can also be used. See Appendix C for more KM initiatives.

The easiest measures can be attained from process and IT applications, but just because we can easily obtain metrics on a KM initiative, it doesn't mean that metric provides a useful way of measuring the maturity of that initiative.

6. Categorizing Measures

Measures can be categorized in hard (dollar savings) and soft (intangible measures)

1. **Hard (Dollar Saving Metrics)**
    a. Profitability/ increased revenue/ decrease in maintenance costs
    b. $ saved/ cost reduction
    c. Time saved
    d. Quality improvements, # of errors avoided
    e. Increased productivity
    f. Successful mission
    g. Products successfully launched

2. **Soft (Intangible Measures)**
    a. Cost avoidance
    b. Customer satisfaction
    c. Quick problem resolution
    d. Professional development
    e. Improved employee satisfaction/ Morale improvement
    f. Improved knowledge retention
    g. Capturing and retaining at-risk data
    h. Stories related to validated success
    i. Enhanced innovation
    j. Improved skills/competency
    k. Trust

7. Common Measures

These measures can be used for most KM initiatives:

- System Metrics monitor the usefulness and responsiveness of supporting technology. They give an indirect indication of knowledge sharing and reuse, but can highlight which assets are the most popular and any usability problems that might exist and be limiting participation. Easiest to collect from software system.

  - Page visits
  - Contributions
  - # of members

- Output Metrics measure characteristics at the project or task level, such as the effectiveness of lessons learned information to future operations. Direct process output for users give a picture of the extent to which personnel are drawn to actually using the knowledge system.
  - Replies to discussions (online, e-mails, phone calls)
  - Documents downloaded and used

- Outcome Metrics concern the impact of the KM project or initiative on the overall organization. They measure large-scale characteristics such as increased productivity. (DON, 2001)
  - Time, money or lives saved
  - Injuries prevented
  - Changes in the way we do business

System ▪ Number of downloads ▪ Number of site accesses ▪ Dwell time per page or section ▪ Usability survey ▪ Frequency of use ▪ Number of users ▪ Percentage of total employees using system (see Appendix A for definitions) (MCCES, 2005)	***Output*** ▪ Usefulness surveys where users evaluate how useful initiatives have been in helping them accomplish their objectives ▪ Usage anecdotes where users describe (in quantitative terms) how the initiative has contributed to business ***Outcome*** ▪ Time, money, or personnel time saved as a result of implementing initiative ▪ Percentage of successful programs compared to those before KM implementation

8. AKM Maturity Indicator Overview

This tool (located on the following page) is used to look at the overall maturity from an organizational perspective. It will give you an idea of where your organization stands on a maturity level before you start examining common KM initiatives that promote effective KM programs.

a. The AKM Maturity Indicator is used to determine an organization's overall level of KM maturity relative to the adoption and use of the AKM Principles
b. The Indicator is composed of two axis
c. The "X" axis (horizontal) measures an organization's adoption and use of the AKM Principles (People/Culture, Process and Technology) on a five point scale ranging from 1 – KM Novice to 5 – KM Mature
d. The "Y" axis (vertical) applies the key elements of an integrated KM program (Culture, Strategy, Competency and Metrics) against the AKM Principles across the maturity level spectrum
e. The AKM Principles are both color coded and typed in differing fonts in order for the user to easily determine which of the principles applies
f. The AKM Maturity Indicator provides an organization a means to evaluate their overall state of KM maturity
g. An organization can use the Indicator to better understand the types of behaviors more KM mature organizations exhibit
h. Check the boxes that apply to your organization

AKM Maturity Indicator

How KM Mature is Your Organization?

Key Elements of an Integrated KM Program ↓	AKM Principles: People/Culture / *Process* / Technology KM Novice 1 — 2 — 3 — 4 — KM Mature 5				
Culture **What is the organization's posture towards adopting and applying the AKM Principles?**	❑ Knowledge is power attitude ❑ Little sharing occurs ❑ ***Not invented here mentality*** ❑ ***Change is discouraged*** ❑ Systems reside in silos	❑ Knowledge shared within parts of org. ❑ Sharing is not taboo ❑ ***Process improvements are considered*** ❑ Systems begin to open	❑ Knowledge sharing exists ❑ Sharing is encouraged ❑ ***Workers want efficient processes*** ❑ Systems balance access and openness	❑ Knowledge sharing is the org. norm ❑ Sharing is expected ❑ ***Workers seek & deploy improvements*** ❑ Systems use robust search	❑ Knowledge shared is power attitude ❑ Sharing is rewarded ❑ ***Innovation is encouraged*** ❑ Systems cross all boundaries
Strategy **How does the organization implement the AKM Principles?**	❑ No KM strategy or plan ❑ KM not linked to org. success ❑ ***Inefficient processes rule*** ❑ IT strategy not linked to user's needs	❑ KM strategy emerging and aligning with org. goals ❑ ***Process improvement plan developing*** ❑ IT strategy considers KM	❑ KM plans and governance model developing ❑ ***KM process assessments performed*** ❑ IT & KM strategies are linked	❑ KM strategy tied to org. strategy ❑ ***KM action plan developed and implemented*** ❑ KM strategy drives IT strategy	❑ KM strategic plan in place and in use ❑ KM drives org. success ❑ ***Efficient processes rule*** ❑ IT supports workers needs
Competency **How skilled is the organization in applying the AKM Principles?**	❑ No CKO/KMO ❑ Little grasp of KM concepts and methods ❑ ***Unsure how to encourage efficiencies*** ❑ Little KM tool training	❑ KM champions emerge ❑ Interest in KM training growing ❑ ***Workers consider process improvements*** ❑ KM tool use considered	❑ KM champions lead initiatives ❑ KM Pros complete KM training courses ❑ ***Workers apply knowledge to improve*** *processes* ❑ Tool usage rises	❑ CKO/KMO lead KM efforts ❑ KM training available for all ❑ ***All workers seek improvements*** ❑ KM tool usage routine	❑ Org. leaders drive KM adoption and use ❑ KM training mandatory ❑ ***Continuous improvements*** ❑ KM tool usage embedded in org.
Metrics **How does the organization measure the impact of applying the AKM Principles?**	❑ KM is not a factor in org. success ❑ ***No metrics to assess KM impact*** ❑ Any existing metrics used to measure output not outcomes	❑ The need to measure KM is considered ❑ ***KM metrics are used to baseline processes*** ❑ Metric tracking options considered	❑ Metrics are considered vital to KM adoption and use ❑ ***KM metrics are used to validate KM initiatives*** ❑ Metrics track usage and attitudes	❑ Metrics impact KM initiatives ❑ ***KM metrics drive process improvements*** ❑ Metrics embedded in systems and tools	❑ KM impacts org. success ❑ ***Metrics are part of KM strategy*** ❑ Metrics mostly measure KM outcomes and are leading indicators

9. How Do You Measure the Maturity of Your KM Initiatives?

Use the table below to determine the maturity of your KM Initiatives. Each initiative has a scale from 1 (KM Novice) to 5 (KM mature). Subjectively determine the maturity your organization has for each KM initiative/activity. Circle the maturity on each initiative. If the initiative doesn't apply to your organization, don't use it.

If you want to get more detail, you can apply weights to the initiatives that are more important to your organizations. Communities of Practice might be critical to some organizations, but portals might not. Finding experts quickly to some organizations might be critical to some organizations, but not to others. Multiply the maturity level rating you gave by the weight and place that # in the total column.

Add up the totals using the table below. Divide by the # of initiatives your organization uses. This will give you a rough idea of the maturity of your organization.

To customize the model further, organizations can add other KM initiatives they are using to the table. This list of KM initiatives is not all inclusive. Many more KM initiatives exist. Additional space is provided to add organizational specific KM initiatives. Appendix C lists additional KM initiatives. Appendix D contains a summary of KM measures.

How Do You Measure the Maturity of Your KM Initiatives?

KM Initiatives	**Maturity**					**Weight**	**Total**
Knowledge Management Program (Overall)	1	2	3	4	5		
People/Culture							
Culture of Collaboration	1	2	3	4	5		
Communities of Practice (CoP)	1	2	3	4	5		
Face to Face/Brown Bag Meetings	1	2	3	4	5		
Online Suggestion Box	1	2	3	4	5		
Capture Knowledge of Key Retiring/Departing Employees	1	2	3	4	5		
Chief Knowledge Officer	1	2	3	4	5		
TBD Organizational KM Initiative	1	2	3	4	5		
TBD Organizational KM Initiative	1	2	3	4	5		
Process							
Efficient Processes	1	2	3	4	5		
TBD Organizational KM Initiative	1	2	3	4	5		
TBD Organizational KM Initiative	1	2	3	4	5		
Technology							
Repository/Content Management System	1	2	3	4	5		
Search	1	2	3	4	5		
Expertise Location System	1	2	3	4	5		
Lessons Learned Management System	1	2	3	4	5		
Best Practices Management System	1	2	3	4	5		
Virtual Collaboration for Meetings	1	2	3	4	5		
TBD Organizational KM Initiative	1	2	3	4	5		
TBD Organizational KM Initiative	1	2	3	4	5		
Maturity Rating (Total divided by # of KM Initiatives)							

Metrics for Evaluating your KM Program:

System

- N/A. There probably aren't any system measures to measure a KM program overall

Output

- # of project teams using KM initiatives/KM approaches

Outcome

- Reduce (on average) the number of instances of critical incidents due to failed problem solving or knowledge loss (Patel, 2009)
- Improvement in employee's skills
- KM initiative is part of the daily work process of the organization
- Creation of new knowledge/sharing knowledge/ transferring knowledge

a. People/Culture

1) Culture of Collaboration

KM Novice	KM Mature
Little sharing occurs. Knowledge is power and sharing will threaten my job/rating/salary. There is very little collaboration or team work in the organization. Most workers are individual contributors, and are rewarded as such.	Employees routinely share what they discover, create and produce. Employees routinely ask themselves, "Who else needs to know?" A knowledge sharing culture and environment for KM exists with organizational alignment and is subject to performance monitoring. Knowledge sharing is rewarded as there is an expectation that collaboration, knowledge transfer, and knowledge loss prevention is everyone's responsibility.

1	2	3	4	5	Weight:

Metrics:

System

- N/A – a system can't track culture of sharing

Output

- % of employees that share (gathered in survey)

Outcome

- Time, money, or personnel time saved as a result of sharing

2) Communities of Practice (CoP)

KM Novice	KM Mature
No CoPs	Org has multiple, thriving CoP that produce results

1	2	3	4	5	Weight:

Metrics:

System

- # of unique visitors (only useful if % is a high percentage of total user population)
- % of total community that are active contributors (# of members/# of active contributors)

Output

- Usefulness survey (users evaluate how useful the community has been helping them accomplish their objective)
- # of useful knowledge items passed on
- # of problem solved
- **#** of "back channel events" (lunches, one-on-one meetings, hallway communications)

Outcome

- # of lives saved.
- # of useful CoPs that contribute to the mission of the org.

- # of discussions that save members time/improve efficiency or pass on a best practice
- Speed of problem resolution
- Decreased learning curve (measured by increasing the probability of finding experts, mentoring and coaching that goes on inside communities and the context that the community provides for the org as a whole) (Openacademy, 2007)
- Reduction of rework and prevention of "reinventing the wheel" (Measured by re-use of the artifacts in the Community and the connections to the individuals who developed them) (Openacademy, 2007)
- Increased innovation (measured by the # of new strategic initiatives spawned by the community or germinated at community events)
- Decreased attrition rate (measured by comparing the attrition rate of community members versus their counterparts who are not connected to a CoP)

NOTE: Often organizations try to use easily assessable metrics to determine if their CoP is providing benefit. Not all metrics are useful. Here is an example of metrics that are not that useful and the reason why.

System Metrics That Aren't That Useful	**Reason Why**
# of communities	Doesn't tell us if communities are providing value
# of hits	So what? Doesn't tell if knowledge was exchanged
# of articles	So what? Doesn't tell if articles were read.
# of discussions	So what? Doesn't tell us if what is being discussed helped any one
# of new discussions	More useful than # of discussions, but are new discussions improving the org and are discussions useful
# of community participants	Doesn't tell if users received knowledge. There are a lot of lurkers on communities that provide no value. Often times people join and see no value of participating further, but they remain a member with no logons or posts.

3) Face to Face/Brown Bag Meetings

KM Novice			**KM Mature**		
Org. does not conduct brown bag lunches, or conducts many face to face meetings			Org. meets face to face and encourages brownbag brain storming sessions		
1	2	3	4	5	Weight:

Metrics:

System

- # of personnel that attend Face to Face/Brown Bag Meetings

Output

- # of brown bags/month where useful info is exchanged

Outcome

- Knowledge exchanged that improved efficiency
- Knowledge exchanged that leads to innovation

4) Online Suggestion Box

KM Novice			**KM Mature**		
Org. does not have online suggestion box for good ideas from employees			Org. has online suggestion box for good ideas from employees. Org. rewards employees that submit good ideas		
1	2	3	4	5	Weight:

Metrics: **Output** • # of useful suggestions incorporated that org. validates are worth to pursue **Outcome** • # of useful suggestions incorporated that improved processes

System Metrics That Aren't That Useful	Reason Why
# of suggestions	Some ideas might be redundant, not all ideas will be worthy of implementation

5) Capture Knowledge of Key Retiring/Departing Employees

KM Novice				KM Mature	
No method for capturing knowledge of key retiring/departing employees.				Org. has a process to capture knowledge of departing employees. In-processing personnel can quickly determine their responsibilities.	
1	2	3	4	5	Weight:
Metrics: **Outcome** • # hours saved getting new employee up to speed compared to old method					

6) Chief Knowledge Officer (CKO)/Knowledge Management Officer (KMO)

KM Novice				KM Mature	
Org. has no CKO or CKO has little authority to institute change.				Org. has a Chief Knowledge Officer that works for the leaders of the organization. CKO has authority to institute change and backing of leadership/middle management and employees. CKO is an integral part of the organization.	
1	2	3	4	5	Weight:
Metrics: **Output** • # of personnel that are trained in KM **Outcome** • # of KM initiatives that improved the org.					

b. Process

1) Efficient Processes

KM Novice				KM Mature	
Org. has many inefficient processes that waste employee's time.				Org. has many improved processes through re-engineering or automated processes creating efficiencies that save users time.	
1	2	3	4	5	Weight:
Metrics: **Outcome** • # of processes that saved employees time					

c. Technology

1) Repository/Content Management System

KM Novice				KM Mature	
More than one place to store info				One web based location to store info.	
1	2	3	4	5	Weight:
Metrics: **System** • # of documents/articles with 5 star rating (other users graded)					

- % of registered users that uses repository/portal daily
- # of clicks to find information
-

Output

- % of total org. that actively contribute
- # of users accessing the same information
- # of employees that use portal features: document libraries/ version control/ workflows/ search

Outcome

- Time, money, or personnel time saved as a result of portal use
- Reduced training time or learning curve as a result of single access to multiple information sources
- Customer satisfaction (based on the value application) (collected through survey)
- # of useful documents that improved performance
- Quality of stored knowledge
- Speed of problem resolution
- How easy is it for people to find the info they want

NOTE: Often organizations try to use easily assessable metrics to determine if their portal is providing benefit. Not all metrics are useful. Here is an example of metrics that are not that useful and the reason why.

System Metrics That Aren't That Useful	**Reason Why**
# of hits	So what? Doesn't tell if knowledge was exchanged
# of documents	Having 100,000 documents doesn't mean they are useful.
# of downloads	Having many downloads doesn't mean they were read and knowledge was transferred.

2) Search

KM Novice			**KM Mature**		
Must search multiple locations and using multiple search techniques?			Can find information in less than 3 clicks		
1	2	3	4	5	Weight:

Metrics:

System

- # of searches
- % of organization utilizing search

Output

- Speed of responsiveness

Outcome

- Relevance of search results

3) Expertise Location System

KM Novice			**KM Mature**		
Manual process. Takes a long time to locate experts within the org. Need to ask around the organization.			Users can find experts in org. quickly using a tool. What used to take days or hours, now takes minutes.		
1	2	3	4	5	Weight:

Metrics:

System

- Degree of participation (e.g. at IBM, 111,000 of 350,000 employees registered with their Expertise Location System)
- Frequency of use

Output
- Reduced time to solve problems

Outcome
- Time saved fining experts
- Savings or improvement in organizational quality and efficiency

4) Lessons Learned Management System

KM Novice				KM Mature	
Org. has little or no processes to capture goods ideas.				Org. has a formal process to capture lessons learned	
1	2	3	4	5	Weight:

Metrics:

System
- # of downloads
- Usability survey

Output
- Time to solve problems
- Anecdotes
- User ratings of contribution value

Outcome
- # of lessons that saved lives - E.g. Battle Command Knowledge System (BCKS)
- Time, money, or personal time saved by applying lessons learned from others
- # of lessons learned implemented in others parts of the org.
- # of lessons learned that improved efficiency
- # of lessons that lead to innovation

5) Best Practices Management System

KM Novice				KM Mature	
Org. has little or no processes to capture goods ideas.				Org. has a formal process to capture lessons learned	
1	2	3	4	5	Weight:

Metrics:

System
- # of downloads

Output
- Anecdotes
- Usability survey

Outcome
- Time, money or personal time saved by implementing best practices
- # of groups certified in the use of best practice
- Rate of change in operating costs
- # of best practices that lead to innovation
- How frequently is knowledge updated

6) Virtual Collaboration for Meetings (Web Conferencing)

KM Novice				KM Mature	
Org. does not use any virtual collaboration				Org. uses virtual collaboration tool to conduct meetings. E.g. Adobe Connect (DISA Button 2)	
1	2	3	4	5	Weight:

Metrics:

System
- # of meeting conducted virtually from desktop vs traveling

Output
- $ saved in TDY travel getting to meeting
- # of hours saved not traveling

Outcome
- # of discussions that lead to innovation

10. Now What? How Do You Interpret Your KM Maturity Level Number and Improve KM in Your Organization?

So your KM maturity is a 2.2. What does that tell you? First, look at the AKM Maturity Indicator, page 5, to analyze your maturity number. The KM Maturity Indicator helps you determine an organization's level of KM maturity relative to the adoption and use of the AKM Principles. It will tell you where you need to focus based on the AKM principles.

The next step is to analyze the score of each KM initiative. Below are methods to improve each KM initiative.

People/Culture

Knowledge Management Program (Overall)
- If your organizations needs help getting an indication of their health in terms of knowledge flow, knowledge creation and transfer, and ultimately knowledge management processes, strategies, and approaches, contact BCKS to request a Knowledge Assessment https://www.us.army.mil/suite/doc/12505065. The knowledge assessment will most often identify performance gaps between what we are doing and want we should be doing, and highlight the gap between what we know and what we should know to perform at the desired level. The knowledge assessment will lead to a knowledge strategy which in turn helps us develop knowledge management approaches and methods to close the gaps.
- BCKS personnel trained in KM will come to your organization and conduct a KM assessment.
- For a practical KM how to guide, see BCKS Companion Site to FM 6-01.1 Knowledge Management Section Proponent Validated KM "How To" Handbook https://www.us.army.mil/suite/kc/11032288

Culture of Collaboration
- Changing the culture of an org. will not happen overnight. One way to encourage sharing is create an incentive program that rewards sharing. Monetary rewards are not always possible for military, Army and DoD civilians. Highlight a knowledge sharing team on the organization's intranet/ portal or public web site (as long as no sensitive information is shared). Include a picture of the knowledge sharing team and an article/case study of their KM sharing.

Communities of Practice (CoP)
- If you need to form a CoP, utilize the BCKS Knowledge Management Section Handbook (Virtual), Chapter 6 KM Processes Section 4, How to Start a Professional Forum. This is an excellent reference to help you start an CoP. https://www.us.army.mil/suite/collaboration/GetDocument.do?doid=12013219
- Need better facilitation. See the Army Professional Forum Facilitator Guide https://forums.bcks.army.mil/secure/CommunityBrowser.aspx?id=689255
- Browse the 50+ BCKS Professional Forums to see how successful communities operate https://forums.bcks.army.mil/secure/communitybrowser.aspx?

Face to Face/Brown Bag Meetings
- Encourage departments to conduct regularly scheduled brown bag lunches where topics are discussed to acquire and share knowledge.

Online Suggestion Box

- Institute a program to capture good ideas. The workforce often has lots of good ideas to improve the organization. They see inefficient processes everyday and have ideas that might make the organization more efficient.
- Defense Intelligence Agency (DIA) instituted a program it calls "Cross Boundaries". http://www.toffler.com/shownews.asp?newsid=46. This program encourages the workforce to submit their ideas to solve problems, improve operations and make the organization better.
- The DIA director chairs the monthly meetings. Employees come with an idea to make the organization better. They present their ideas and become the primary advocate and owner of the idea. DIA provides a Cross Boundaries Coach and resources to collaborate and implement their idea.
- Have leadership chair the meetings once a quarter. All ideas are looked at and an incentive program is developed. A committee needs to be established to review the ideas. Resources should be allocated if the ideas are worthwhile. You could have innovator of the Quarter award ceremony for the best idea presented. (Goal could be 4 good ideas a year).

Capture Knowledge of Key Retiring/Departing Employees

- You don't need to capture all the knowledge of key Retiring/Departing Employees, just the critical knowledge they possess. Ideally someone right seat rides with outgoing personnel, but when that is not possible, utilize these methods:
    - Interview the expert and video the session, make those videos available online.
    - Establish a short questionnaire that quickly captures some of their critical knowledge before they depart.

Chief Knowledge Office (CKO)

- Understand your organizations strategic goals. Develop a KM strategy for your organization based on the Army Knowledge Management Strategy Plan Template https://www.us.army.mil/suite/doc/15242630 on the Army Knowledge Strong (AKS) Web Site on AKO. https://www.us.army.mil/suite/grouppage/107678
- Look for quick wins where KM initiatives will provide real results for your organization. Concentrate on inefficient processes. Become indispensible to your organization.
- Request Basic KM Training from BCKS at Ft. Leavenworth, KS. https://www.us.army.mil/suite/portal.do?$p=297597
- Become a member of KMNet. Search the wealth of KM knowledge and share ideas with other KM practitioners. https://forums.bcks.army.mil/secure/CommunityBrowser.aspx?id=341623&lang=en-US
- Develop a KM training program where you can train your organization on KM.
- Establish a Knowledge Management Working Group. Develop a KM Working Group Charter. KM working Group should meet quarterly. Members of the KM Working Group should be key leaders in your organization.
- A wealth of information on Knowledge Management is contained on BCKS's AKO site: https://www.us.army.mil/suite/grouppage/35717

Process

Efficient Processes

- Conduct a knowledge assessment of your organization. Determine inefficient processes that can be improved. Determine processes that don't need IT solutions and work for non IT solutions such as streamlining those processes. Then work with your IT development in developing solutions to automate inefficient processes. Appendix C lists processes across the Army that need improving:
    - Improve staffing of documents through workflow
    - Automate tracking of tasking

- Automate significant event reporting
- Establish a trip report document library
- Create web based enterprise calendaring
- Enterprise conference room scheduling

Technology

Repository/Content Management System

- Pick a repository that is Army approved. E.g. Joint Interoperability Test Command (JTIC) approved, has a NETCOM Networthiness certificate and is supported by your IT department. E.g. AKO, SharePoint Portal Server or IBM Lotus Domino Software or other approved portal.
- For AKO training, see the BCKS AKO Administrator Training https://www.us.army.mil/suite/portal.do?$p=557156
- For SharePoint training, see the Microsoft's SharePoint Server 2007 training courses at: http://office.microsoft.com/en-us/training/HA102358581033.aspx
- For additional SharePoint training go to BCKS's SharePoint training at: https://www.us.army.mil/suite/collaboration/GetDocument.do?doid=13962175

Search

- Work with your IT department to work towards one search engine to search across all sources of data.

Expertise Location System

- Work with your IT department to develop an Expertise Location System. Application should provide a free text search and a Subject Matter Categories drop down. Many organizations have an online phonebook system, but it lacks an expertise field. Rather than invest in a new system, modify your existing system to display user's expertise. Allow the user to easily input their expertise. Every 6 months, user's expertise should be updated. A simple email to update your profile/expertise should be sent out.

Lessons Learned Management System

- Work with your IT department for creating a Lessons Learned Management System. Create a process for capturing and approving lessons learned.
- The Center for Army Lessons Learned (CALL) is the great example of a Lessons Learned Management System. CALL collects and analyzes data from a variety of current and historical sources, including Army operations and training events, and produces lessons for military commanders, staff, and students. CALL disseminates these lessons and other related research materials through a variety of print and electronic media, including this web site. The private site which requires a CAC or password. https://call2.army.mil/Login.aspx
-
- The format for a lesson learned is as follows:
  - Title:
  - Observation:
  - Discussion:
  - Lesson Learned/TTP:
  - Recommendations:
  - References:

Best Practices Management System

- Work with your IT department to develop a Best Practices Management System. Develop a process for approving best practices to be posted. Here is a potential format for a Best Practices Management System:
  - Best Practices Title:
  - POC:
  - Categories of Practice

        - People
        - Process
        - Technology
        - Organizational Categories TBD
    - Summary:
    - Situation Before Initiative Began:
    - Process:
    - Results Achieved:
    - Lessons learned:
    - Transferability:
    - References:

Virtual Collaboration for Meetings

- Get familiar with Defense Connect Online (DCO) https://www.dco.dod.mil/ Adobe Connect/ Button 2 or E-Collab/ IBM Sametime/ Button 1 https://www.e-collabcenter.com/wps/portal/login
- Attend the DCO Live Training https://www.dco.dod.mil/public/dsp/liveTraining.cfm
- Take the DCO On-Demand Training at https://www.dco.dod.mil/public/dsp/tutorials.cfm
- Find a classroom in your organization and demonstrate to capabilities of DCO. Train users how to use DCO or IBM Sametime.
- Conduct a pilot with organizations that conducts a lot of TDY. Record metrics to see if the organization saves time and $ utilizing virtual meeting tools.

11. Conclusion.

The reason to collect metrics is to improve KM in your organization by measuring what matters and whether the metric tells if knowledge is being shared. This paper looks at practical ways to measure the KM state of an organization. By looking at accepted KM Initiatives used throughout the KM community and adding additional metrics based on your strategic objectives, an organization can determine useful metrics for those KM initiatives.

Measurements for KM initiatives, just like KM itself, is not a hard and fast science. (DON, 2001). The metrics in the paper are merely a guide. KM leaders will have to apply their best judgment to determine which KM initiative and metrics make sense for their organization. Using common metrics used in the KM community and the AKM Maturity Indicator, your organization will be able get a better measure of the KM maturity of your organization.

REFERENCES

American Productivity & Quality Center (APQC). (2003). *Measuring the Impact of Knowledge Management, Consortium Learning Forum, Best Practice Report.*

Chunn, Scott, KMO; Martinez Tito, LTC; Landers, Sandy, CIO/G6, ICON Portal Manager (Nov 2006). USAIC, Ft. Huachuca, AZ. *KM within the Generating Force.*

Department of the Navy (DON) Chief Information Officer (CIO). (Aug, 2001). *Metrics Guide for Knowledge Management Initiatives*
Marine Corps Communication-Electronics School (MCCES) Training Command, (Dec 2005). Standing Operating Procedure for the Knowledge Management Program

FM 3-0, Operations, Section 7-53, (27 February 2008), Downloaded from https://akocomm.us.army.mil/usapa/doctrine/DR_pubs/dr_aa/pdf/fm3_0.pdf on 20 April 09

Openacademy. (Apr 2007). *Building CoPs - Organizational Value Metrics for CoPs.* Downloaded from http://www.openacademy.mindef.gov.sg/OpenAcademy/Central/HTML%20Folder/KM/bcp/buildcop_ValueMetric.htm on 4/26/2007

Patel, Sameer. (11 Mar 099). Why 'time saved' and other such nebulous metrics are a cop out for Enterprise 2.0, Retrieved on 6 Apr 09 from http://www.pretzellogic.org/2009/03/why-time-saved-and-other-such-nebulous-metrics-are-a-cop-out-for-enterprise-20/

Prevou, Michael and Nelson, John. (29 Apr 2008). Measuring You KM Program Effectiveness – Not Just Activity. Presented at the 9th Annual Knowledge Management Conference and Exhibition, Washington, DC

APPENDIX A. System Metrics Examples

Here is a list of system metrics that software applications can track.

1. Number of downloads
    a. Tools measure the number of items downloaded.
2. Number of site accesses
    a. Tools can measure the number of site access, it can tell you how many access per user, and where they came from. So you can get results like: 25 unique users (by IP and username) accessed the KM workgroup page
3. Dwell time per page or section
    a. This can be done with tools also, but could be a deceiving answer. It doesn't know why there is dwell time on a page. Could be the page is interesting, could be the page is hard to understand or confusing, could be the phone rang, etc.
4. Usability Survey
    a. Send to users in the organization to collect their opinions.
5. Frequency of use
    a. Tools can tell frequency of use by user or object. Meaning … User A has accessed page A 100 times and page B 50 times in the last month, or page A has been accessed 1000 times in the last month.
6. Number of users
    a. Tools can provide this for a period of time, e.g. there were 1500 unique visits during Sep 2006.
7. Percentage of total employees using system
    a. Tools can provide statistics, e.g. out of 1500 unique visits during Sep 06, 57% of the unique visits came from this location or 20% of all unique visits were to the system.

(Chunn, 2006)

APPENDIX B. Definitions.

Community of Practice (CoP). A CoP is a group of people who regularly interact online or offline to collectively learn, solve problems, build skills and competencies, and develop best practices around a shared concern, goal, mission, set of problems, or work practice.

Lessons Learned Management System. The Center for Army Lessons Learned (CALL) is the great example of a Lessons Learned Management System. CALL's definition on Lessons Learned: "Validated knowledge and experience derived from observations and the historical study of military training, exercises, and combat operations that leads to a change in behavior at

either the tactical (standard Operating procedures (SOP), TTP, and so forth), operational, or strategic level or in one or more of the Army's DOTMLPF domains." Army Definition AR 11-33.

Best Practices Management System. Best Practice asserts there is a technique, method, process, activity, incentive or reward that is more effective at delivering a particular outcome than any other technique, method, process, etc. The idea is that with proper processes, checks, and testing, a desired outcome can be delivered with fewer problems and unforeseen complications. Best practices can also be defined as the most efficient (least amount of effort) and effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people. Source: Wikipedia

Expertise Location System. IT system that lists the skills and experience of people in the organization.

Knowledge Management is the art of creating, organizing, applying, and transferring knowledge to facilitate situational understanding and decision making. (FM 3-0, 2008)

APPENDIX C. Additional KM Initiatives

1. **People/Culture**
    - Conduct AARs immediately after small tasks or projects
    - Improve Brainstorming techniques
    - CKO quarterly newsletter highlighting KM best practices
    - Establish a unit KM advisory board
2. **Process** (Many military units have similar inefficient processes that can be improved)
    - Improve staffing of documents through workflow
    - Automate tracking of tasking
    - Automate significant event reporting
    - Establish a trip report document library
    - Create web based enterprise calendaring
    - Enterprise conference room scheduling
3. **Technology**
    - E-learning
    - Virtual collaboration: Wiki's/Blogs
    - AKO
    - BCKS (Tomoye)
    - Defense Connect Online(Adobe Connect) (Button 2)
    - IBM Sametime (E-Collab) (Button 1)
    - Army Green Force Wiki
    - HARMONIE Web

APPENDIX D. Summary of KM Measures

KM Initiative	Metrics
Knowledge Management Program (Overall)	**System** • N/A. There probably aren't any system measures to measure a KM program overall **Output** • # of project teams using KM initiatives/KM approaches **Outcome** • Reduce (on average) the number of instances of critical incidents due to failed problem solving or knowledge loss (Patel, 2009) • Improvement in employee's skills • KM initiative is part of the daily work process of the organization • Creation of new knowledge/sharing knowledge/ transferring knowledge
People/Culture	
Culture of Collaboration	**System** • N/A – a system can't track culture of sharing **Output** • % of employees that share (gathered in survey) **Outcome** • Time, money, or personnel time saved as a result of sharing
Communities of Practice (CoP)	**System** • # of unique visitors (only useful if % is a high percentage of total user population) • % of total community that are active contributors (# of members/# of active contributors) **Output** • Usefulness survey (users evaluate how useful the community has been helping them accomplish their objective) • # of useful knowledge items passed on • # of problem solved • # of "back channel events" (lunches, one-on-one meetings, hallway communications) **Outcome** • # of lives saved. • # of useful CoPs that contribute to the mission of the org. • # of discussions that save members time/improve efficiency or pass on a best practice • Speed of problem resolution • Decreased learning curve (measured by increasing the probability of finding experts, mentoring and coaching that goes on inside communities and the context that the community provides for the org. as a whole) (Openacademy, 2007) • Reduction of rework and prevention of "reinventing the wheel" (Measured by re-use of the artifacts in the Community and the connections to the individuals who developed them) (Openacademy, 2007) • Increased innovation (measured by the # of new strategic initiatives spawned by the community or germinated at community events) • Decreased attrition rate (measured by comparing the attrition

	rate of community members versus their counterparts who are not connected to a CoP)
Face to Face/Brown Bag Meetings	**System** • # of personnel that attend Face to Face/Brown Bag Meetings **Output** • # of brown bags/month where useful info is exchanged **Outcome** • Knowledge exchanged that improved efficiency • Knowledge exchanged that leads to innovation
Online Suggestion Box	**Output** • # of useful suggestions incorporated that org. validates are worth to pursue **Outcome** • # of useful suggestions incorporated that improved processes
Capture Knowledge of Key Retiring/Departing Employees	**Outcome** • # hours saved getting new employee up to speed compared to old method
Chief Knowledge Officer	**Output** • # of personnel that are trained in KM **Outcome** • # of KM initiatives that improved the org.
Process	
Efficient Processes	**Metrics:** **Outcome** • # of processes that saved employees time
Technology	
Repository/Content Management System	**System** • # of documents/articles with 5 star rating (other users graded) • % of registered users that uses repository/portal daily • # of clicks to find information **Output** • % of total org. that actively contribute • # of users accessing the same information • # of employees that use portal features: document libraries/ version control/ workflows/ search **Outcome** • Time, money, or personnel time saved as a result of portal use • Reduced training time or learning curve as a result of single access to multiple information sources • Customer satisfaction (based on the value application) (collected through survey) • # of useful documents that improved performance • Quality of stored knowledge • Speed of problem resolution • How easy is it for people to find the info they want
Search	**System** • # of searches • % of organization utilizing search **Output** • Speed of responsiveness **Outcome** • Relevance of search results
Expertise Location System	**System** • Degree of participation (e.g. at IBM 111,000 of 350,000

	employees registered with their Expertise Location System • Frequency of use **Output** • Reduced time to solve problems **Outcome** • Time saved fining experts • Savings or improvement in organizational quality and efficiency
Lessons Learned Management System	**System** • Degree of participation (e.g. at IBM 111,000 of 350,000 employees registered with their Expertise Location System • Frequency of use **Output** • Reduced time to solve problems **Outcome** • Time saved fining experts • Savings or improvement in organizational quality and efficiency
Best Practices Management System	**System** • # of downloads **Output** • Anecdotes • Usability survey **Outcome** • Time, money or personal time saved by implementing best practices • # of groups certified in the use of best practice • Rate of change in operating costs • # of best practices that lead to innovation • How frequently is knowledge updated
Virtual Collaboration for Meetings	**System** • # of meeting conducted virtually from desktop vs traveling **Output** • $ saved in TDY travel getting to meeting • # of hours saved not traveling **Outcome** # of discussions that lead to innovation